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ABSTRACT

In a study of gender equity issues in early childhood services, questionnaires were sent to staff and parents associated with five early childhood services in Sydney, New South Wales, Australia. Data were also obtained from observations of interactions between 3- to 5-year-olds and regular staff in the services. Other areas examined in the study were the activity and peer preferences of the children; the level of sex-stereotyped play in the services; and the degree to which there was a match between awareness, perceived behavior, and what was actually occurring. Data indicated that sex-role stereotypes are significant features of children's behavior in some early childhood settings and that these stereotypes are often unconsciously supported by the adults in these settings. A literature review covers materials concerning the development of young children's sex roles and gender equity issues in early childhood education. Recommendations for working towards the removal of stereotypical beliefs and attitudes about the sex role, behavior, and potential of individuals are provided. Appended are 18 references and related materials. (GLR)

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GENDER EQUITY: THE STATE OF PLAY IN EARLY CHILDHOOD SERVICES

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INTRODUCTION

The many issues concerning gender and equity in education have been brought to our attention since the early 1970's. The disadvantages of sexism within society, and within education has been widely documented in Australia and overseas. The differing outcomes of the education process for girls and boys have also been clearly stated and confirmed by research (Commonwealth Schools Commission, 1987). However, most of this literature focuses on secondary education with some emphasis on primary education. The implications of sexism and sex-role stereotyping in early childhood education has been underrated by many researchers (Bruce, 1985). Perhaps this is primarily because other researchers may lack the understanding and knowledge that we have of the influence of early childhood education in the establishment of foundations for children's development and their future success in the learning system. Or is it that there is a perception that gender inequities don't exist in educational services for children who are under school age?

It was in this context that I undertook a qualitative study of five early childhood services in Sydney. The study involved questionnaires to staff and parents and the collection of observational data of actual behaviours within these centres.

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AIMS OF THE STUDY

While this study was essentially an exploratory one, the aims of the study were to:

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- *review literature concerning sex-role development of young children and gender equity issues in early childhood education;*
- *to investigate the levels of awareness of gender equity issues within a small group of early childhood services;*
- *to collect data on current practices/behaviours in relation to gender equity in those services;*
- *to investigate the activity and peer preferences of young children in these services*
- *to investigate the level of sex-stereotyped play in these services;*
- *to assess if there is consensus or a mismatch between awareness, perceived behaviour and what was actually occurring.*

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REVIEW OF LITERATURE

Sex-roles are learned as part of the socialisation process and stereotypic sex-roles can be a product of this process. Earlier theorists believed that sex-roles were the natural correlates of biological and physiological sex differences, and thus they became endemic in traditional child rearing practices and sex-role stereotyping. More recent theorists have examined the role of parents and other socialising agents such as teachers and peers in children's sex-role development.

Social Learning theory and Cognitive Developmental theory (while differing in the focus and degree) agree that children acquire concepts about their sex role by observing others. From these observations children associate certain patterns of behaviour to be female/male appropriate. Children's behaviour preferences are then based on what they perceive is appropriate for their own sex.

Bandura (1985) adapted the Social Learning theory to a Social-Cognitive learning approach, postulating that observational learning is affected by cognitive processes. That is, when the child is exposed to a model, the outcome in behaviour from the observation depends on the child's skills in attending, in the retention of the information observed, their ability to reproduce modelled events and the degree of motivation required to model the behaviour. Bussey (1983) and Huston (1983) also attribute social cognition for the development of sex-roles, as children process and discern information from the behaviour of many models, in a variety of situations and frequency of behaviours, over a period of time.

While it has been established that by the age of 3 years children have acquired a gender identity (Kohlberg, 1966; Bussey, 1983 and Huston, 1983) and can label others, gender constancy (i.e. that their gender identity will remain invariant) may not be fully developed for several more years. Studies undertaken by Bussey (1983) have also concluded that children in this age group learn behaviours considered to be appropriate to their sex and the opposite sex before they are able to put the reasons for their behaviour into words.

Many studies have been conducted to determine the origin of children's toy and activity preferences (Connor & Servin, 1977; Rubin, Watson & Jambor, 1978; Eisenberg, Murray & Hite, 1982; Perry, White & Perry, 1984 and Lloyd & Smith, 1985). While these studies concluded that children do prefer same-sex appropriate toys/activities, the explanations of why have not been conclusive. The study by Eisenberg, Murray & Hite (1982) however, did conclude that children used virtually no sex-role reasoning to justify their actual preference. However, their reasons related to what the toy could do or if the toy/activity was associated with objects or people that the child valued.

Therefore, if children do model behaviours (having the cognitive skills and motivation to do so) that are seen to be valued by people who are important to the child, it is essential that children are exposed to several, consistent and long term models who display non-stereotypic behaviours. Where the adult is also an active model, children's participation in that activity is increased, with a greater impact for girls if the model is female (Serbin, Connor & Citron, 1981 and Huston, 1983). Children's self-esteem can be heightened if it has a broad base developed from a range of skills and competencies that are expanding rather than being limited.

METHODOLOGY

The Settings:

The observational study was undertaken with children aged between 3 - 5 years in pre-school and long day care settings, as this age group is the most suitable to observe across both settings. Centres were selected within and across geographical areas of Sydney. The five centres used were in the inner city, lower north shore and western areas. Four centres were visited six times and one centre received five visits. The same group of children being observed each time. With the exception of one group, there were approximately the same number of girls as boys in the groups observed. These visits took place between late March and early July, 1989. Only regular staff were observed and no recorded data was taken that involved students and casual relief staff. At the conclusion of these visits, staff and parents were asked to complete a questionnaire.

The Observations - The First Three Visits:

Observations were taken of the naturally occurring interactions between adult/child and between peers. These interactive behaviours were identified and coded.

On each visit the reporter spent between 1½ - 2 hours at the centre. Observations were recorded on the following inventories:

- *indoor activities*
- *outdoor activities*
- *adult/child interactions*
- *mode of dress of staff/children*

For each inventory, an observation check list code was developed to define the criteria used. Criteria for the indoor/outdoor checklists were recorded alphabetically. Each area was then observed for a five minute period on a systematic basis. One visit entailed an order of observing areas from top to bottom (on the checklist), another visit entailed observing the order from bottom to top, and for the third visit, areas were selected at random before arrival at the centre.

The Observations - The Second Three Visits:

While the inventory checklists were useful in highlighting aspects of children's play and their interactions with each other and adults, the reporter found them limiting in determining the salience and quality of the play and interactions that were being observed. Therefore, for the final three visits, the reporter used time sampling, point sampling and anecdotal observation techniques to collect data.

As with the initial visits, approximately 1½ - 2 hours was spent at the centre. The reporter however, remained in a given area for as long as the play/interaction was deemed valuable to record for the purposes of the study.

Purpose of Questionnaire:

The purpose of the parent questionnaire was to determine if parents' attitude towards sex-role stereotyping may be an influence on children's behaviour in terms of which behaviours may be supported and encouraged or discouraged and what goals they may have for their children. The purpose or area of analysis was masked by the reporter in the questions that were asked.

The purpose of the staff questionnaire was to examine how staff see the children's involvement with themselves and each other in terms of sex-role stereotyping, their awareness of and interest in gender equity issues and if this then indicated a mismatch of intentions and actual behaviour observed. Staff were informed of the purpose of the study when the questionnaires were given out and thus the purpose of their questionnaire was not masked.

RESULTS

Data from this study indicated that sex-role stereotypes are a significant feature of children's behaviour in some early childhood settings and these stereotypes are often "unconsciously" supported by the adults in these settings.

The Observations:

Boys and girls were involved in curriculum areas (activity preferences) that are traditionally accepted as being appropriate/liked by children of a particular sex. Marked differences were seen in the level of participation of boys and girls in the areas of blocks, climbing, dramatic play, manipulative equipment, painting, puzzles, sand play, woodwork and family corner (see Table 1). When girls and boys were together in an area, their play was categorised as being 50% parallel, 41% was co-operative and 9% was solitary. Curriculum areas where the greatest numbers of co-operative interactions occurred were dramatic play, sand and family corner areas. The single, dominant curriculum area in which adults spent their time with children was art/craft (other than easel painting). Substantial periods were also spent in the manipulative equipment and sand play areas. Adults spent the least amount of time with children during free play activities, in the water play, painting and book areas.

The results of the adult/child interactions for both verbal and physical interactions were interesting.
Of all adult interactions, 57% were with boys and 43% were with girls. Boys received more of the adults attention to their extension of language and knowledge, use of open-ended questions, direct involvement in their play, attention to inappropriate behaviour and behaviour expectations. In no area of verbal interaction did the girls rate higher, except for adults' use of closed questions to them. Both girls and boys received the same level of interaction involving holding/cuddling and smiling/laughing with the adult. (See Table 2). A summary of all the anecdotes and time samples taken during the study indicated that 73% of these involved children/or adults in stereotypic behaviour and only 27% involved non-stereotypic behaviour, which should be of concern.

The Questionnaire - Parents:

The response rate from each centre varied between 21% - 62%.

The vast majority of returns of the parent questionnaire were completed by the female parent. Parents indicated that their boys enjoyed books/stories and music/singing as activities at the centre. Play with other children and outdoor activities were also significant. Girls preferences were indicated as painting, art/craft, as well as books/stories and outside play. Dress-up activities and play with adults were indicated for girls but not at all for boys. These comments are interesting in view of the actual observed behaviour of boys. (See Table 1).

Parents indicated strongly that the most important attributes for their child, at this point in time are to be interested in learning and secure in their environment. The least important attributes included the ability to speak another language, ability to read and write some words and to enjoy maths/science.

Attributes for their child in the future included the ability to speak another language, ability to problem solve, enjoy maths and science and to be independent and self-disciplined. The major gains for their child attending the centre were the opportunities to interact with peers and as a preparation for school.

The Questionnaire - Staff:

The response rate from each centre varied between 50% - 90%.

The results of the staff questionnaires indicated that 63% were often actively involved with girls in non-stereotypic areas of play and 56% indicated they were often actively involved with boys in non-stereotypic areas. 50% indicated that girls were often actively involved in using manipulative equipment and 75% indicated that boys were often involved in reading books. The two main areas that staff indicated girls were good at/enjoyed were dramatic play and drawing, and for boys they were manipulative equipment and blocks.

When describing the play of boys and girls together, 69% described it as co-operative. The dominant themes of play for boys in the block corner were roads and buildings/cities. For girls, the themes were houses and shops. Girls and boys both took on the respective roles of mother and father and were also equally involved in cooking in the family corner. Boys were not indicated to be involved in play about shops/shopping as were girls, and girls were not indicated to be involved in play about going to work, as were boys.

DISCUSSION

A boy and a girl were climbing into a tree "*Ha! Ha! I'm higher than you; I am strong, I am clever*" chants the girl.

This anecdote was significant - girls are becoming assertive and taking on non-stereotypic roles. Let's continue the observation ...

"I am clever (a pause) I am sexy, I am sexy" the girl begins to chant with a big smile and a wriggle as she does so. The adult asks *"What does that mean?"* She replies: *"It means you get dressed up and look cute."*

Adult: *"Who told you that?"*

Girl: *"Oh, I did ... and my grandpa."*

Enter the stereotype!

This anecdote typifies the results of the study. Early impressions were that girls were involved in less stereotyped play activities. They were seen in the block corner, sand play, woodwork, climbing, maths areas, etc. Boys were also observed to be in art/craft, family corner and dramatic play activities. Girls and boys were involved in co-operative play with each other. Adults were interacting with children in these areas, and physical affection and nurturance were shared.

On closer observation however, the quality of the play and the interactions were a disappointment to the earlier impressions. The findings highlighted that adults give more attention to boys than girls and that the quality of interactions is better for boys and that boys receive better teaching instruction than girls. The findings highlighted that while girls were participating in more non-stereotypic play, again the quality of their participation and outcome was poorer than for boys in the same areas. While there were numerous co-operative play situations involving boys and girls, the boys were pre-dominantly the leaders and directors of the play.

CHILDREN'S ACTIVITY PREFERENCES

Children's activity preferences have not substantially altered from those indicated by Connor and Serbin in 1977 and by Ebbeck in 1985. The most significant curriculum areas for boys are still blocks, construction (manipulative) and sand play. It is these curriculum areas that the Commonwealth Schools Commission (1987) reported as providing opportunities for spatial and mathematical skills, which have also been identified as the skills that girls are not interested or proficient in.

Ebbeck's study (1985) noted that boys participated less in dramatic play than did girls. This study showed a substantial difference in that the boys were dominant in this form of play. "Superhero" play was a consistent theme of dramatic play for boys in all centres. It is positive to see that boys are more involved in dramatic play for all its learning opportunities, and "Superhero" play can be a vehicle for positive outcomes, which is not often realised by adults who try to discourage it as "aimless and aggressive". Rather, with adult involvement/or intervention this form of dramatic play can become more productive. Parents did not identify this area as one that their child enjoyed. It may have been considered as part of the categories of "outdoor play" or "play with other children". Few parents mentioned the term "dramatic play" which may indicate that staff do not discuss this aspect of the curriculum, or at least in this term, with parents.

Girls participated mostly in traditional play activities such as art/craft, family corner, dough/clay and dramatic play. In comparison to Ebbeck's study, gains have made in areas such as climbing and sand play, but further that the type of play girls are involved in the sand pit area is often stereotypic (see Anecdotes 19, 39, 47).

It was interesting to note the equality of participation of girls and boys in maths/science area on Table 1. The figures show equality, but the interactions between adult and child in these areas is substantially greater for boys, as is the quality of the interactions (see Anecdotes 26, 30, 34, 35, 41).

Parents did not see the importance of children enjoying maths/science at this point in time, which perpetuates the misconception that these concepts are not being formed at this level, and have little bearing on future curriculum choices. It may also be that parents do not see that the learning of these concepts can occur through play.

CHILDREN'S PEER PREFERENCES/INTERACTIONS

(Anecdotes 3, 5, 9, 10, 12, 16, 17, 19, 20, 23, 24, 25, 42, 48)

While staff did not perceive boys or girls to substantially exclude each other from their play, this is occurring in areas where girls need to participate, such as manipulative, dramatic play - maths areas.

While girls participation in art/craft is higher than boys (and this also confirms Ebbeck's results) again, the content is often stereotypic. Boys are drawing/painting scenes of fantasy, cars, the countryside, etc. and the girls main focus is themselves and family and friends.

Positive, co-operative play was more evident in the day care settings than in pre-school. This could be due to the fact that these children spend more time with each other and therefore more time to get to know each other. On the average, children in day care had been in attendance in the centre together for a greater period of time than pre-school children had been.

While co-operative play between girls and boys was significant in terms of frequency (41%), again the quality of this type of play was in favour of boys. Boys tended to be the leader or dominate the play more than girls, or boys used this opportunity to assert their superiority over girls. For example:-

A boy and a girl were doing a maths matching game.

Boy: *"That's number 8" says the boy.*

Girl: *"No it's not".*

Boy: *"Yes it is you stupid" he said with annoyance. (It was 9)*

The girl gets up and moves away (Anecdote 38; similar examples can be seen in Anecdotes 9, 12, 14, 16, 22, 23, 24, 36 and 40).

On some occasions girls were more assertive and would not allow themselves to be manipulated by boys (see Anecdotes 5, 19, 24, 39 and 42). Assertiveness was not substantially considered to be a desirable attribute for boys or girls by their parents. It is a possibility that assertiveness could be confused as aggressiveness by some parents, and thus it would not seem desirable for boys or girls. This was evident in the parent questionnaire, especially for girls.

The study highlights low scores for adults directing children to and from an activity and this could confirm that adults respect children's choices of play activities and peers, but thereby may give unconscious support for sex-typed play by children (Ebbeck, 1985; Brophy and Good, 1978 and Rodd, 1986). The previous studies indicated children's preferences for toys, activities and peers can be based on same-sex preferences which can result in stereotyping. Can and should the adult in an early childhood setting intervene in children's selection of toys, activities and peer group? Many would argue that a range of opportunities and experiences exist within the programme and that part of children's development involves decision and choice-making which should be respected. While in principle one would agree, adults should be mindful that if children's choices and decisions are based on stereotypic concepts about themselves and others, that they do a disservice to children and their future potential by being unresponsive to these issues.

ADULT/CHILD INTERACTIONS

Other studies have been conducted to determine the level of interaction between teachers and girls and boys and if differential treatment exists. Ebbeck (1985) for example, conducted an observational study of 30 pre-school teachers in South Australia. Evident in the data responses was the finding that approximately 63% of the verbal interactions were with boys and approximately 36% were with girls. Similarly, teaching instruction was directed at boys in 60% of the situations and 40% with girls.

While the frequency of interactions is important, the quality of these interactions may be even more critical. Bruce (1985) noted that when girls did not know an answer the teacher reassured them and moved on, whereas if the situation involved a boy, exploratory interaction often occurred to persist or search for the answer. Another study also found that boys were given eight times more instruction on how to solve problems for themselves, whereas the teacher would often do the task for girls (Sadker et al., 1977). Also, girls seek adults' help more than boys but for reasons less likely to foster cognitive development (Hodgeon, 1985 cited in Perrett, 1988).

My findings concur with Ebbeck's study in relation to adult/child interactions being significantly towards boys. The data reveals 61% of verbal interactions were with boys, while only 39% were with girls. While the total of all interactions is 43% with girls and 57% with boys, the dominance of adults' interactions with boys must be of concern.

Again, the quality of these interactions need to be highlighted. Peters (1987) states that "*...what largely governs the quality of learning that occurs (in a classroom) is the quality of the interaction in it*". If children are to gain confidence, to think laterally, etc. they need to be given stimulation and appropriate challenge. The frequency of "quiz-type" questioning by adults rather than supportive, interactive communication also needs further investigation. In areas such as extending the child's language and knowledge, the use of open questions and the involvement of adults in children's play, boys benefited more than girls.

For example:-

Two boys and one girl in a block corner. She is placing her pieces in a long line. The boys' construction has different levels and they are using a variety of shapes. The teacher comes over and asks the boys about their work, as she gets down to their level. The girl moves across and touches the teacher's shoulder.

Girl: *"Look at my long road".*

Teacher: *"Yes, good girl" replies the teacher and she turns back toward the boys.*

Teacher: *"Do you need to build the walls higher or is it ready for the roof?"*

(Anecdote No. 43; see also 4, 13, 26, 27, 30, 31, 33, 35, 37, 41 and 47 for other examples).

Adults also responded to the disruptive behaviour of boys in over 76% of these type of interactions, giving them greater attention. Teachers need to look at reducing this type of behaviour rather than giving more attention to it. Group dynamics, in particular the pattern for boys to play together in large groups often results in adults spending a lot of time "controlling" these large groups. Girls however tended to be in either dyadic, triadic patterns or singularly, but rarely in groups of four or more girls. Thus the balance of adults' attention is tipped towards boys as a result of these group patterns.

This study also confirms Huston's (1983) conclusion that art and manipulative activities take up most of the adults' time during free play activities. When the teacher was more actively involved in other curriculum areas the play of the children changed (see Anecdotes 4, 13, 28, 32, 33 and 44) and the girls' level of self-esteem was raised. The participation of a male teacher in the family corner, in one centre seems to have significantly raised the level of participation of boys in this area and contributed to some instances of less stereotyped play. (See Anecdotes 1, 4, 13).

<u>THE QUESTIONNAIRES</u>

The responses from the staff questionnaire did not seem to accurately tap the responses needed to determine wether a real mismatch of what adults perceive and what they actually do in providing gender equity in their service exist. Although the results did confirm that adults indicated children's play preferences of activities, themes, etc. generally still reflect sex-typed play.

From the responses, I can only speculate that staff are unconscious of the amount of time and the quality of the time they spend with boys as compared to girls. I would also question how staff believe that gender equity is or is not an issue for them and parents as 50% indicated they have had no involvement in either reading on the topic or attending inservice courses.

Some staff seem to be aware of gender equity issues, but have not indicated whether their centre has ever evaluated the programme to determine its equity. Others acknowledge it, but do not consider it to be relevant to themselves and the service in which they work.

Parents indicated that socialisation was an important gain that their children received from attending an early childhood centre. While staff were not asked to comment on this aspect, the reporter's knowledge of the field would confirm that staff would support this view. So staff in liaison with parents are in a vital position to influence children's socialisation.

CONCLUSION

While the sample of centres was very small, some important conclusions may still be drawn. Progress towards more gender equitable programmes have been noted in some centres, but we need to look past the superficial progress of seeing girls in the block corner, boys in family corner, etc. to determine what is actually happening once children are in these areas. The quality of the interactions between children together and between children and adults needs to be examined even closer. The quality and the salience of interactions are as influential as the number of interactions taking place. Positive adult interaction which can lead to less stereotyped play and behaviour is vital if all children are to gain substantial benefits within any programme.

Teachers need to look at the quantity and quality of cross-sex play and group work. Lilian Katz, on a recent visit to Australia, highlighted the need for more project work that all children can be involved in and contribute to and work together to help break down some of these stereotypes. Parents and staff need to work closely together on this issue because if it is not supported in both environments, then inconsistency arises and further compounds and confuses the messages that children are receiving.

The impact of sex-role stereotypic behaviours and expectations can produce outcomes of limited social and occupational choices that can contribute to women's poverty and social dependence, according to the Commonwealth Schools Commission (1987). Therefore sex-typing of play styles, preferences, behaviour and expectations at the early childhood level, need to be recognised as having implications for the social and cognitive development of children that can affect their future skills, interests, career opportunities and aspirations. While gender cannot be dismissed as an aspect of human development, individuals should not be disadvantaged or limited as a consequence of it. Individual differences and abilities need to be nurtured and developed and not constricted by traditional sex-role stereotypes that are based on biological and physiological differences.

As influential socialising agents, adults in early childhood setting must actively and consciously work towards the removal of stereotyped beliefs and attitudes about the sex-role, behaviour and future potential of individuals. Disadvantage comes from within our social system (including culture and education) not from children's inabilities to capitalise on the "equal opportunities" that they are given.

The perception that children's choices should be respected, that equal opportunity exists and that there is no differential treatment between boys and girls may contribute to the complacency about sexism in early childhood education (Brophy & Good, 1978; Bruce, 1975; Ebbeck, 1985 and Rodd, 1986).

Complacency seems to be the enemy - "*Girls and boys are playing together, they are treated equally, they are taking on non-stereotypic roles, etc. and therefore gender equity is a reality in our service*" seems to be a generally held view. However, on closer scrutiny, gender equity may not be the state of play in some children's services.

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ANECDOTES

1 Four boys in the family corner. *"I'm going to vacuum, this carpet is filthy"* he says. *"Well, I'm going to bed, come and tuck me in"* says another boy and so two boys do this.

3 One girl at puzzles. She tried for several minutes after tipping out all the pieces – she looked at another girl and said *"I can't do this"* pushed it aside and left the table.

4 Male teacher and two boys in family corner. Teacher *"I saw you were nearly hitting..., what's the matter?"* Boy *"I'm cranky."* Teacher *"Well, let's talk about why you're cranky instead of just hitting out".*

5 Three boys and one girl involved in *"office play"*. The boys are using the telephones and typewriter, girl approaches to help pull out the paper in the typewriter. Boy *"Get away, I don't want you to."* The girl stays and continues to help. The boy tries to physically push her away, but she stays. *"I'm here – go!"* says the boy. The girls stops for a moment and looks at the other boys, *"You can use this computer when I finish"* says one of the other boys.

9 One boy and one girl in sandpit. *"I'm making a birthday cake for you"* says the boy, *"so give me that stuff you've got, okay."* The girl complies and hands over her bucket and collection of sticks.

10 Two girls and two boys in block corner. *"I need that shape to go in this corner,"* says one boy to the other. *"Yeah, let's get those ones"* and they take some pieces from the girls building alongside them. *"This isn't a good shape is it for you"* says the boy as they take them. The girls remained silent and continued with their *"house".*

12 Two boys and one girl in the sandpit. *"This is our garden, we need lots of plants in it – here, come and get some and put them over there okay"* directs one boy – the other boy pulls out some grass, gives it over and leaves, the girl does this several times. *"You have to get a lot you know"* continues the boy, to which the girl responds.

13 Two boys in family corner, throwing the plates and accessories on the floor. Male teacher says *"Would your father let you do that at your place? Tell me why you did that?"*

14 Boy and girl at the drawing table. *"That looks like a cup"* says the girl about the boy's drawing. *"Does it – oh yeah!"* says the boy – he continues *"I'm cleverer than you."* The girl replies meekly *"I know"* and both continue own drawings.

16 Two boys and one girl in family corner. *"That's a boy's hat, not a girl's hat"* says one boy as he points to the girl, they both laugh. The girl walks away removing the hat as she goes.

17 Three boys are in block corner, a girl approaches and bends down to play with the accessories, one boy pulls at the toys and the other boys look angrily at the girl, one boy shoves her with his feet. The girl gets up and moves over to the drawing table where there are two other girls and they welcome her to join them.

19 Three boys and two girls in the sandpit involved in parallel play – girls are patting the sand gently and are making cakes. The boys are alongside digging vigorously, tipping sand near the girls. *"Don't put the sand near us"* says the girl, the boy looks and continues and is more careful about where he places the sand.

20 Two boys are stacking crates *"This is a tower, we're the builders"* one says.
Two girls arrive *"Hey, get out of here, we're the builders."* *"Well, so are we"* responds the girl. *"Oh no, you can't, just us men are builders"* replies the boy, The girls look at each other and move away.

22 Four girls and one boy in family corner. The girls are dressing up, putting on dresses, nighties, scarves, etc. The boy watches and says *"The doctor will be here at seven he's busy now at the hospital, you better get ready okay."*

23 One boy and one girl in block corner. Boy says *"We need one more piece for the bridge."* *"Hey, use this piece"* says the girl. Boy puts the block onto the construction and it falls. *"See, I told you"* says the girl.
The girl begins to pick up the blocks and the boy says *"Give them to me!"* and he places them and directs her by saying *"Not there, put it on this side."*

24 Two girls join one boy playing with lego. *"Do you like my house?"* said the boy. *"Yes, it's nice, big house"* replies the girl. Boy – *"It's got a garage for three cars."* Girl – *"I'm going to build one too."* Boy – *"Do you want me to help you?"* Girl – *"No, I can do it, thanks."* But the boy hands over the pieces to the girls while they put it together.

25 Four girls at the top of the climbing fort. The are hanging over the top and yelling in chant. *"Girls, only girls, girls, girls, girls"* as they snigger at the boys below. One girl says *"Let's get back to the house before the boys get in there, we want them out."*

26 Two boys are looking outside the fence to a trailer carrying cars. Teacher says *"It's carrying those cars from the factory to the car yard so that they can be sold."* She looks and sees two other boys close by (on her other side were three girls) and calls them to come and look at the trailer. *"What type of truck do we call this?"* she asks.

27 *"We've got make-up on"* says the girl to the teacher. *"Don't you look pretty"* is the response and the girls move on.

28 *"You girls are very clever, that puzzle is too easy for you"* says male teacher to two girls.

30 Three boys and male teacher using magnets. *"Let's see which objects it will pick up. Will it pick up plastic?"* The boy tries and says *"No"*. *"What is this made of?"* he asks and boy replies *"That's heavy, that's metal."* *"Look at the other objects in the container and show me which ones you think the magnet will pick up"* says the teacher.

31 Girl calls out to teacher. He doesn't hear so she goes over and taps him on the shoulder. *"I'm a bride"* she says. He asks *"Can I come to the wedding?" "I can't get married because none of the kids will marry me."* The teacher did not respond and she moved away.

32 Boys had been playing with lego for a good part of the morning. The teacher moved over to that area. A girl was looking at her and she invited the girl in to play, which she did. No girl had played there all morning.

33 Teacher to girls on climbing structure. *"That's it, keep going, you're clever. You need strong arms to pull yourself up and over – yes, well done!"*

34 Teacher and boy and girl at puzzle. "That's a very hard puzzle, good boy." As the girl takes one from the shelf, she says "That's a hard puzzle, wait and I'll get you another one. Here, try this one."

35 Two girls and three boys in block corner. Boys are using planks, ramps and accessories. The girls are placing blocks on top of each other making a house. The teacher looks at the girls' work and says *"That's lovely"* and turns to the boys says *"Tell me about what you made here?"*

36 Two girls and two boys in family corner. Girl is holding a doll. Boy – *"Is that baby sick?"* She nods and rocks baby. Boy – *"I'll ring the doctor"* and uses the telephone. Other boy comes over *"I'm the doctor and this is the nurse."* Boy – *"The baby has to have a needle and then she'll be better, put her on the bed."*

37 Teacher says to girl. *"Your painting is beautiful, go and hang it up."* When a boy finishes his painting, she says *"That's a clever painting, tell me about it."*

39 The girls were digging out the dirt from a hole. As two boys approach, they call almost in unison *"No more room"* and so the boys walk away saying *"We need that for the river and the dam"*. The girls continue with their play *"Let's make a cake for dinner tonight"* says one girl and the others agree.

40 Girl and boy on climbing frame. *"I'm the driver"* says the boy. *"Okay, I'm the passenger, I'm going to the shops to buy food for dinner"* says the girl. *"I'll wait in the car park and buy some chops"* says the boy.

41 Two girls using manipulative toys. *"Look, we made aeroplanes"* said one girl to the teacher. *"Great"* she says. A boy says to the teacher *"Look at this, it's funny"* to which she replies *"Yes, it has only one wing, what do you need to fix it?" "There aren't any more pieces like this one"* says the boy. *"Well, what else could you use that would be the same?"*

42 Two boys and one girl on the climbing frame. The boys are pushing and shoving and won't let the girl on. *"Let me on"* she calls. She pushes a bit too and says firmly again *"Let me on here will you?"* As she says this the boys look at each other and shrug. *"Okay, get on"* says one of them.

44 Two boys are using the dough. *"I can show mummy how to make these pizzas"* says one to the teacher. He says *"You can show your daddy too!"*

47 One girl and one boy in the sandpit. Teacher says to the girl *"What are you making?"* and says *"Cakes for tea."* Teacher asks the boy *"What are you building?"* and he says *"A tunnel for the trucks."*

48 *"Girls aren't allowed in here"* yells the boy as the girl enters the area where the lego is. The male teacher says *"All children are allowed to play there."*

TABLE 1 - CURRICULUM AREAS - SUMMARY OF CHECKLISTS #1 AND #2

CURRICULUM AREAS	NO. OF BOYS INVOLVED	NO. OF GIRLS INVOLVED	TOTAL	NO. OF INSTANCES OF CO-OP PLAY BTW B & G
Art / Craft	88	98	186	5
Blocks	83	13	96	4
Books	18	26	44	1
Climbing	90	47	137	6
Dough / Clay	29	36	65	8
Dramatic Play	104	51	155	11
Family Corner	30	49	79	7
Jumping Boards	55	50	105	1
Maths / Science	24	24	48	4
Manipulative Equipment	104	30	134	6
Painting	12	24	36	0
Puzzles	43	26	69	2
Sand Play	96	40	136	10
Water Play	21	13	34	0
Woodwork	19	6	25	1
Other (includes informal music, cooking, swings, puppets, ball games, bikes, etc.)	113	69	182	15
TOTAL				81

When children were together, the type of play was:

50% - parallel
41% - co-operative
9% - solitary

TABLE 2 - ADULT / CHILD INTERACTIONS - SUMMARY OF CHECKLIST #3

VERBAL INTERACTION	NUMBER OF INTERACTIONS BOYS	GIRLS	TOTAL
Greets child	30	29	59
Initiates conversation with child	31	16	47
Ignores child's initiation	5	4	9
Gives directions	48	41	89
Directs child to an activity	19	14	33
Directs child from an activity	15	4	19
Gives praise	35	22	57
Encourages child	13	11	24
Extends child's language	37	22	59
Extends child's knowledge	57	32	89
Questions child - open ended	52	29	81
- closed	30	46	76
Uses child's name	44	22	66
Uses substitute	8	7	15
Diverts behaviour	18	6	24
Sets limits for behaviour expectations	33	13	46
Disapproves of child / action	28	7	35
Becomes involved in the play	47	28	75
Silent when near child	23	17	40
TOTAL	573	370	943
	61%	39%	
PHYSICAL INTERACTION			
Maintains eye contact	43	34	77
Smiles / Laughs with child	25	25	50
Initiates touch	8	16	24
Responds to touch from child	6	17	23
Cuddles / holds child	26	26	52
Comforts distressed child	7	6	13
Attends to child's physical needs	9	9	18
Is at the child's level	33	58	91
Demonstrates for the child	16	14	30
Becomes involved in the play	39	26	65
TOTAL	212	231	442
	48%	52%	

ALL INTERACTIONS:
Boys - 57%
Girls - 43%